

# Bandpass Filter

## BPF-A113+

50Ω 108 to 118 MHz

### Maximum Ratings

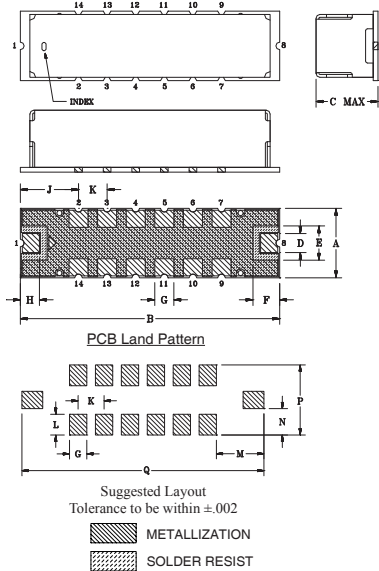
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max

Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF IN	1
RF OUT	8
GROUND	2,3,4,5,6,7,9,10,11,12,13,14

### Outline Drawing



### Outline Dimensions (inch/mm)

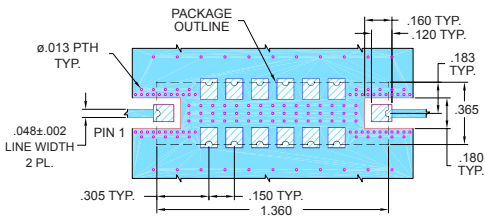
A	B	C	D	E	F	G	H
.365	1.360	.35	.100	.180	.140	.100	.100
9.27	34.54	8.89	2.54	4.57	3.56	2.54	2.54

J	K	L	M	N	P	Q	Wt.
.305	.150	.120	.275	.152	.405	1.400	grams
7.75	3.81	3.05	6.99	3.86	10.29	35.56	4.0

Note: Please refer to case style drawing for details

### Demo Board MCL P/N: TB-363+ Suggested PCB Layout(PL-227)



#### NOTES:

- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- Denotes PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
  - Denotes COPPER LAND PATTERN FREE OF SOLDER MASK

#### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- Good VSWR, 1.4:1 Typ @ Passband
- High Rejection
- Shielded case
- Aqueous washable

### Applications

- Radio communications
- Harmonic Rejection
- Transmitters / Receivers



Generic photo used for illustration purposes only

CASE STYLE: HQ1157

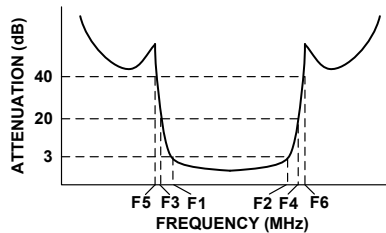
### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

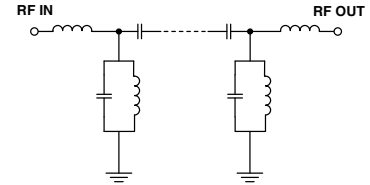
### Bandpass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 3dB)	STOPBANDS (MHz)				VSWR (:1)		
		Loss > 20dB		Loss > 40dB		Passband		Stopband
F <sub>c</sub>	F <sub>1</sub> - F <sub>2</sub>	F <sub>3</sub>	F <sub>4</sub>	F <sub>5</sub>	F <sub>6</sub>	Typ.	Max.	Typ.
113	108 - 118	95	140	85	155 - 2000	1.4	1.7	20

### Typical Frequency Response



### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.5	89.49	27.73
85.0	50.72	132.95
95.0	30.61	40.91
102.0	13.09	13.48
105.0	4.55	2.32
108.0	2.19	1.26
110.0	1.96	1.44
113.0	1.87	1.52
115.0	1.85	1.49
118.0	1.93	1.14
120.0	2.10	1.24
125.0	5.58	1.52
127.0	10.42	2.13
130.0	17.67	10.85
140.0	34.45	30.53
155.0	48.83	55.47
500.0	95.86	275.36
2000.0	62.85	66.90

